DOCUMENT RESUME

ED 198 411 CG 014 931

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TITLE The Influence of Peer Group Pressure Upon Adolescents' Learning.
PUB DATE 80
NOTE 32p.

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Incentives: *Learning Motivation; *Negative Reinforcement; Peer Acceptance; *Peer Influence; *Positive Reinforcement; Sensory Experience; Socialization; *Stimulation; Young Adults

ABSTRACT

An adolescent's learning patterns are developed throughout the student's socialization process, suggesting that peer pressure may influence learning. Female college students (N=15) aged 19-21 participated in a pencil-maze learning task performed while blindfolded. The task was presented in three categories of stimuli conditions: (1) normal conditions with no stimuation; (2) positive social stimulation consisting of peer approval and encouragement; and (3) negative physical stimulation in which the subject's hand was in a bucket of ice water. No significant differences were found between the positive and negative stimulations as incentives to learning; both conditions were more effective than the normal condition in stimulating learning. (NRB)

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THE INFLUENCE OF PEER GROUP PRESSURE UPON ADOLESCENTS' LEARNING

By

Seta M. Dilanian

1980

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NATIONAL INSTITUTE OF EDUCATION

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THE INFLUENCE OF PEER GROUP PRESSURE UPON ADOLESCENTS LEARNING

Seta M. Dilanian

> "And Moses said to Aaron, 'What did this people do to you that you have brought a great sin upon them?
>
> And Aaron said, 'Let not the anger of my Lord burn not; you know the people, that they are set on evil.' For they said to me, 'Make us gods, who shall go before us; as for this Moses, the man who brought us up our of the land of Egypt, we do not know what has become of him.'
>
> And I said to them, 'Let any who have gold take it off'; so they gave it to me, and I whrew it into the fire, and there came out this calf."
>
> -Exodus 32: 21 - 25[1]

The above passage is an example of how cohesive peer group pressure can influence the behavior of an individual adult. Contemporary adolescence is viewed as a transition period filled with extremes of various types of alliances as the individual attempts to find his identity. One can deduct the inference from the above passage, then, that adolescences are extremely swayed by their peer groups.

[1]The Holy Bible, Old Testament, Exodus 32: 21-25, p.77

Introduction

Statement of the Problem

What are the effects of two types of stimulation (influence of peer group pressure and ice water) upon the learning of adolescents? The general hypothesis tested was that incentives increase learning in adolescents. The null hypothesis tested was that negative and positive stimulation as incentive conditions have no differential effect on learning tasks of adolescents.

Significance of the Problem

Different types and intensities of stimulation are involved in learning. Adolescence is a period of transition between childhood and adulthood. This period is filled with both physical and psychological storms and stresses. An adolescent's learning patterns are developed throughout the student's socialization process; they are not restricted to any one phase of development. More meaningful learning and guidance techniques could be developed if the exact nature of effective stimulus could be determined. In this instance, whether positive social stimulation or negative physical stimulation would motivate the individual pupil to maximum amounts of learning? Consequently, the purpose of this paper is to survey the influence of peer group pressure upon adolescent learning.

Assumptions and Limitations

The first assumption of this investigation centered around the subjects (Ss) innate abilities. All Ss were assumed to possess normal or above average intelligence. By normal or above average intelligence one refers to a range of 80 or above I.Q..[2] Hence, this was to guarantee that the Ss would perform effectively on the learning task.

The second assumption was that all Ss' possessed some level of anxiety. Anxiety refers to a chronic complex emotional state with apprehension or dread as its most prominent component.[3] The assumption was formulated that some degree of anxiety was involved in the learning process. The Ss' innate intellectual abilities as well as their levels of anxiety make up the limitations of the investigation. The primary assumption was that a correlation existed between the types of stimulation employed and pupils' achievement levels.

Definition of Important Terms

Stimulus. Any energy change which excites a receptor, employed loosely to any object or event which has such an effect.[4] It can be considered first some specific physical energy impinging upon a receptor sensitive to that kind of

[2]Elizabeth B. Hurlock. Adolescent Development (New York, 1967), p. 473.

[3]James Drever. A Dictionary of Psychology (Baltimore, 1968), p. 17.

[4]Ibid., p.283.

energy. Second, a stimulus can be considered any objectively describable situation or event (whether outside or inside the organism) that is the occasion for an organism's response.[5]

Reaction time. The time between the presentation of a stimulus and the occurrence of a response.[6]

Peer group. A peer group is defined first as a grouping of age mates, with no necessary consideration as to their interrelations. Second, a peer group is a grouping of individuals who are familiar to each other but who do not necessarily form a natural group involving choices of other individuals, such as a classroom. Third, definition of peer group is small natural group in face-to-face interaction, such as a play group. These three definitions may and do frequently overlap in the total definition of peer group.

From a socio-psychological stand point a peer group is viewed as a reference group.[7] The reference group is defined as a group with which an individual compares himself when he makes self-estimates of status.[9]

Adolescence. In human beings, the period from puberty to maturity, roughly the early teens to the early twenties.[9]

[5]Ernest R. Hilgard and Richard C. Atkinson. Introduction to Psychology (New York, 1967), p.638.

[6]Ibid., p. 635.

[7]Edwin P. Hollander. Principles and Methods of Social Psychology (New York, 1967), p.332.

[8]Ernest R. Hilgard and Richard C. Atkinson. Introduction to Psychology (New York, 1967), p.635.

[9]Ibid., p.618.

Late adolescence is generally between the ages of 16 to 21. For boys late adolescences is between 17½ to 21 years of age; while, for girls the ages of 16 to 20 is considered adolescence. Consequently, late adolescence is a flexiable period which is often determined by the individual's rate of maturation.[10]

[10]Dr. Justin Pikunas, University of Detroit, Professor of Psychology.

Review of Related Literature

The literature analyzed in this section covered articles pretaining to group psychoanalytical approach to adolescent underachievers, and sociological studies related to peer group fulfillment of adolescents needs as related to delinquency. In addition, the articles also discussed social psychological studies related to group influence upon academic achievement.

Baur (1965) investigated the nature of reference groups and role identity as related to achievement. He found that intellectual values were obscured by 'making grades', and collective efforts to raise grade-point averages. A grade which was supposed to function as a means for measuring learning and inducement to study, tended to become an end in itself.

The salient role of college students centered around the Greek system which made elitism prevail over equalitarianism; while, the Independents were reduced to imitative striving, futile protest, or withdrawing. Most of the Independents rejected or ignored the Greek system and found satisfaction in varied interests-studies and pre-professional activities. This formulated two types of self-concepts.

The inter-relationship between the pupil and the professor determined the pupil's classroom role. It was indicated that this type of behavior was formed through direct experience in

classroom rather than in accordance with learning patterns of conduct. It would be misleading to say that the students' relationships with professors are molded by subcultures. Culture is a pattern of conduct learned prior to experience. It is a set of expectations that a person, socialized by a group, brings to a situation which enables him to cope more effectively. The professor stimulates the intellectual curiosity of the students.

Baur validated the notion that each student was motivated to a level of achievement that he set for himself. He validated studies indicating a high correlation to exist between level of aspiration reflected through attitudes of parents, friends, and the student himself. This general trend reinforced the notion that social influences determine how much and how hard a student studies cames from other memberships such as Greek organizations, living groups, and friendship circles. Baur's report validates Alfred Adler's Theory that social interest provides man with the necessary motivation for learning as it propells the individual in his striving for superiority. Hence, the theory of propinquity seems to be in operation. Propinquity refers to the distance or closeness of members in the reference group.

Brittain (1963) discussed social context as related to adolescent, parent, and peer pressures. He explored the hypothesis that the extent to which adolescents are peer conforming when confronted with parent-peer cross-pressures depends upon the nature of the content alternatives presented to them.

He found that adolescents generally do not accept peer

standards uncritically. The results indicate that items eliciting peer-Conforming trends fell at the least difficult end of a rank order; whereas, the tendency toward parent-conformity was directly related to the perceived difficulty of the choice. Consequently, he found that peers are more influential for some things than for others. It appeared that what was important was the affiliative needs of social identity, social reality, and social support.

The effect of peer-group responses upon the attitude development and attitude change of college undergraduates was investigated by Ramon J. Rhine (1960). It was found that peer responses enhanced concept-attitude development and influenced concept-attitude change in interaction with consistency of reinforcement. Of particular importance was Rhine's finding of a characteristic dependence of these students upon the others for a kind of social reality. In both Brittain's and Rhine's articles it seemed that the group provided a definition of the world as it appeared to the members.

The informal group, the Dons, in Leon R. Jansyn's (1966) article confirmed the role of the group in reinforcing the members' view of social reality which affected the behavior of the autonomous group of delinquent adolescent boys. The analysis of narrative data suggested that low solidarity was a threat to the boys and provoked group activity which attracted and reinforced members while increasing solidarity occurred.

The attendence data indicated the operation of group dynamics as the core members demonstrated behavior which guaranteed greater cohesiveness. Consequently, this marginal group of delinquents influenced the behavior of the members through expressions of approval or disapproval. One can deduct that propinquity and solidarity were active agents.

A more practical approach to the role of social context in adolescent learning was presented in two articles. First, Sugarman (1968) suggested that spontaneously formed adolescent groups reinforced the social context from which the members originated. He found that adolescent boys tended to mix with others from similar backgrounds. In essence, membership to a particular group fulfilled innate tendencies in the individual personality structure and reinforced the influence of the adolescents' home. Sugarman also suggested that the values rewarded in the peer-group affected the level of members' striving and achievement. He found that adolescent boys from homes of low intellectual quality who belonged to a group scored higher on school achievement and adjustment. Behavior in line with the emerging norms of the group tended to be rewarded, reinforced, and repeated.

The study by Watts, Lynch, and Whittaker (1969) investigated the socialization patterns, current attitudes, and values in contemporary college students. This survey examined the characteristics involved in contemporary student activists' and nonstudents' subcultures. The results indicated that the

activists differed significantly from the cross-section and nonstudents in that their parents possessed higher economic and educational levels. Statistics indicated a greater political involvement on the part of the activists' parents than the other two samples. In essence, the activists showed greater trends towards agreement with parents on intellectual ideas and religious beliefs. Results (from Srde's Scale of Anomie) also indicated that the activists and the nonstudents felt higher degrees of alienation than the students in the cross-section.

The articles confirmed Alfred Adler's theories of social interest and childhood experiences. The ultimate social interest according to Alfred Adler's Theory consisted of the individual helping society to attain the goal of a perfect society. Yet, social interest included also co-operation, interpersonal and social relations, identification with groups, and empathy; whereas, childhood experiences predisposes a child to a certain type of life. The articles revealed a direct correlation between the individual adolescents behavior and learning within the familial background of the youth.

Another facet to the problem was presented in Brown's article. Brown (1969) discussed the effect of structured and unstructured group counseling with high and low anxious college underachievers. The results indicated that the highly anxious students benefited more from unstructured approach; while, the low anxious students benefited more from a structured group approach. The article drew a direct

correlation between individual asperation, individual personality, group performance, and individual achievement.

In essence, the effect of peer group pressure upon adolescent learning resembles that of a visual spectrum. The spectrum reflects many colors of light depending upon the angle one views. So it is with peer group pressure on learning. The effect depends upon the individual adolescent involved - his personality, the socioeconomic background from which he originates, as well as the student's intellectual familial structure and propinquity of the peer group. Generally, the peer group is a reference group for the adolescent. This reference group provides a positive quality momentum and reinforces learning patterns.

Design of the Study

Method

Subjects

A total sample population of fifteen Ss were used in the experiment. All Ss had volunteered for participation in the experiment. The Ss were females ranging in age from nineteen to twenty-one years.

Apparatus

A pencil maze (See Figure 1 - Appendix), paper, and pencil were used to accomplish the simple learning task. Blindfolds and buckets of ice water were used to present stimulation. A time clock was used to measure reaction time (RT).

Procedure

Small peer group (PG) consisted of three members under each condition of the experiment: (a) S, (b) recorder, (c) PG - recorder and member. The position of the members in the designated roles were chosen at random among themselves. The roles were then rotated giving each of the three members an opportunity to participate in each role. The Ss were divided in five PGs with three members each.

The learning task of the pencil maze was presented in three categories of stimuli (S) conditions: (a) normal (N)

conditions, (b) peer members' stimulation, and (c) physical stimulation. The normal condition of learning without stimulation constituted the control or dependent variable. PG stimulation was presented through members' approval and encouragement towards successful accomplishment of the learning task. The PG stimulation condition was a positive independent variable. Physical stimulation as a negative momuntum towards learning was the S's hand in the bucket of ice water. The physical stimulation condition was also an independent variable. Each of the three conditions were presented with two trials. However, only the second trial was used in the statistical analysis data. The order of Ss presentation was randomally selected and cyclically rotated. This process was used to counterbalance the practice

TABLE 1

SYSTEM OF ROTATING STIMULI PRESENTATION

Ss (PG members)	Trials	Stimuli Conditions		
S 1	1	N	PG	IW
	2	IW	PG	N
S 2	1	N	PG	IW
	2	IW	N	PG
S 3	1	N	PG	IW
	2	PG	N	IW

Note - N refers to normal or control condition.
PG refers to peer group condition.
IW refers to ice water condition.

effect and to eliminate bias because of practice effects.

A room in the Student Union Building was the environmental setting of the experiment. The room was well lighted, quiet, and removed from outside stimulation. All Ss were familiar with the total environmental setting.

Each S was seated and blindfolded at a table in front of the pencil maze. The blindfolding was to exclude extra sources of stimulation from the surrounding environment, such as, facial expressions of PG members, and visual perception of the maze. The S was allowed to run through the entire maze with two trials under the three conditons. The first trial was given as an adaptation phase for the S and a period during which the foreperiod reaction time could be appropriately 'set' by the S. Consequently, the foreperiod is the period between the word 'ready' and the stimulus.[11] The RTs were recorded for each trial. The ERRORS were recorded for each trial. The ERRORS were the S's responses on entering a blind alley in the maze. The trials continued until the S made responses to all three conditions. A total of six trials were made.

Methods exployed in analysis of statistical data were the Median Chi-Square (X^2) Test, the Wilcoxon Signed-Ranks Test, and the Spearman Nonparametric Rank Order Test.

[11] Benton J. Underwood. Experimental Psychology (New York, 1966), p.255.

Presentation and Analysis of Data
Results

In the chi square test (X^2) of the RT and ERRORS a deviation was evident. The difference was not extremely significant at 3.745.

X^2 for RT was 5.018 a two-tailed test. The degrees of freedom (df) was computed to 2; hence, X^2 equaled 5.99 at 0.05 significance level. Thus, the 0.05 significance level of probability was rejected for the RT. The probability level showed that this test was nonsignificant in determining probability.

X^2 for the ERRORS was 1.273. The probability computation would be 2.546 for the two-tail distribution. The df was computed to 2; hence X^2 again equaled 5.99 at 0.05 significance level. Thus, the 0.05 significance level of probability was rejected for the ERRORS. This result indicated that this test was nonsignificant in determining probability. Therefore, the X^2 test rejected the hypothesis of independence; the frequencies in RT and ERROR versus the categories of PG and IW are probably not independent factors in learning level.

A bar graph representation of the general frequency distribution (fd) of RT and ERROR inconjunction with the three variable conditions were diagramed (See Figures 1 and 2). A comparison graphic representation of the average magnitude of frequency responses in percentages to that of the three variable conditions in both RT and ERROR was formulated (See Figure 3). Results indicated that PG-RT was longer but with

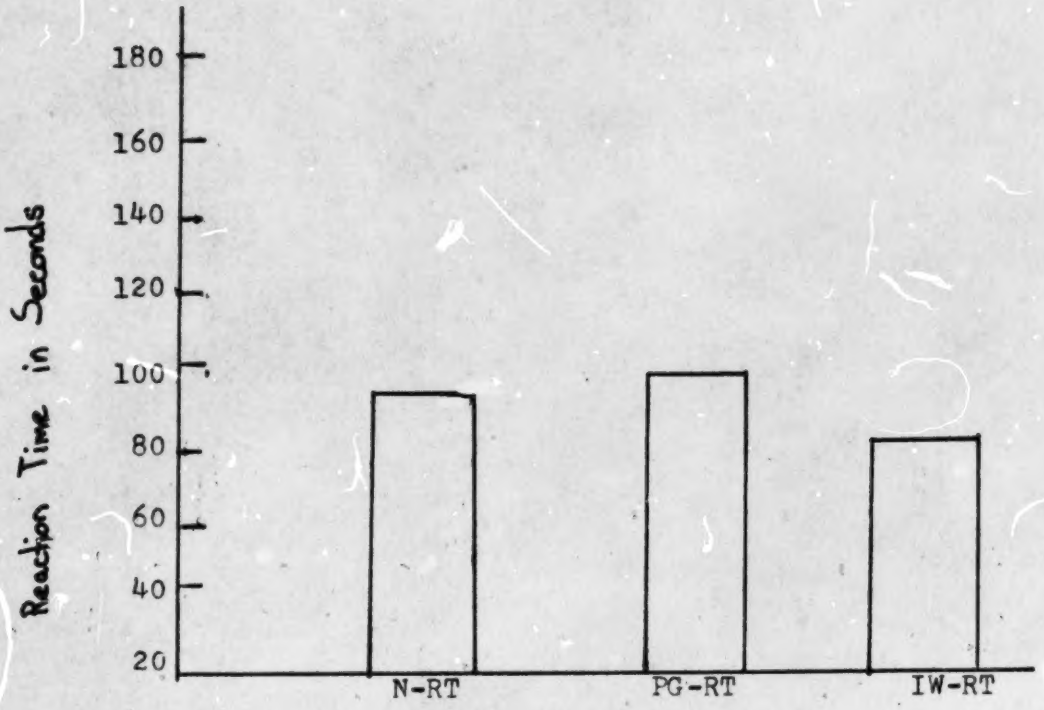

Figure 1. Bar Graph of Reaction Time (in seconds) under Three Conditions

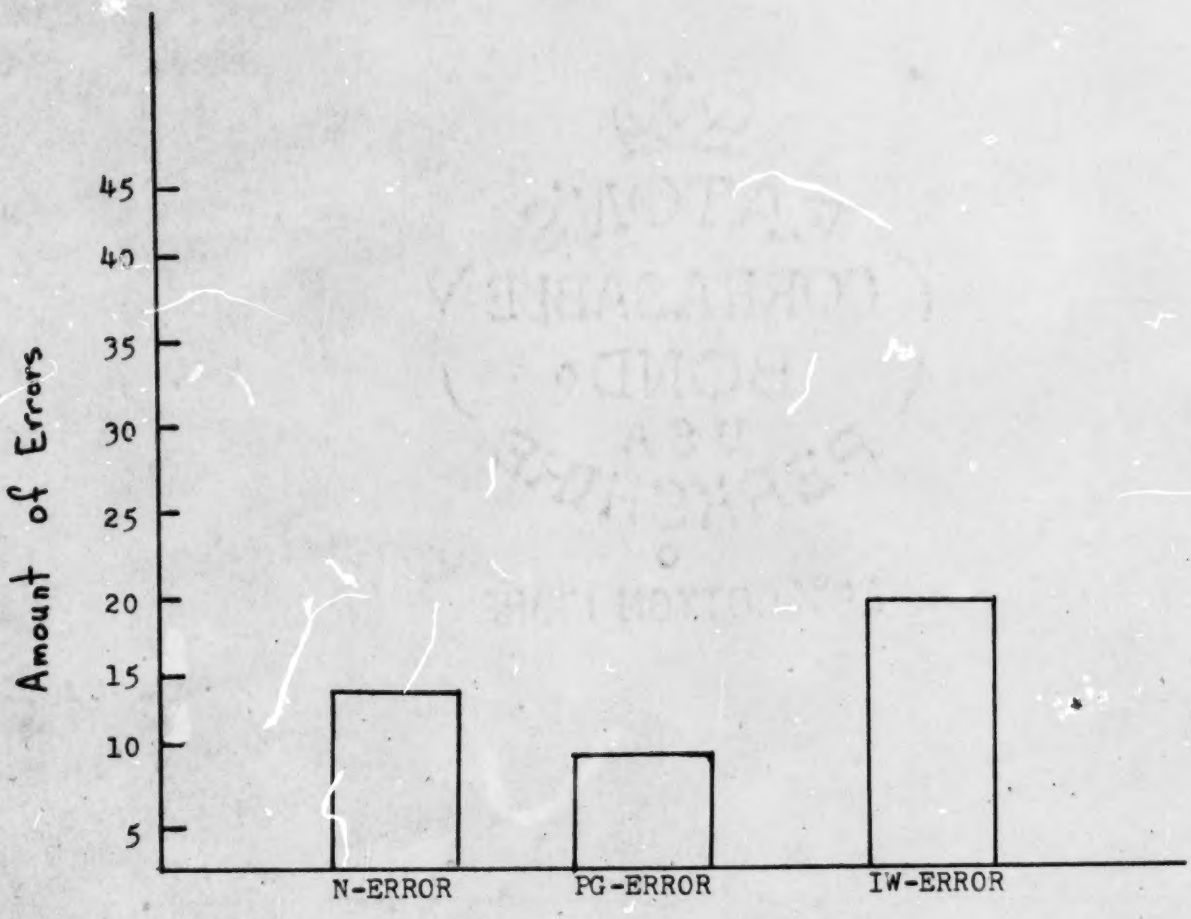

Figure 2. Bar Graph of the Amount of Errors under Three Condtions

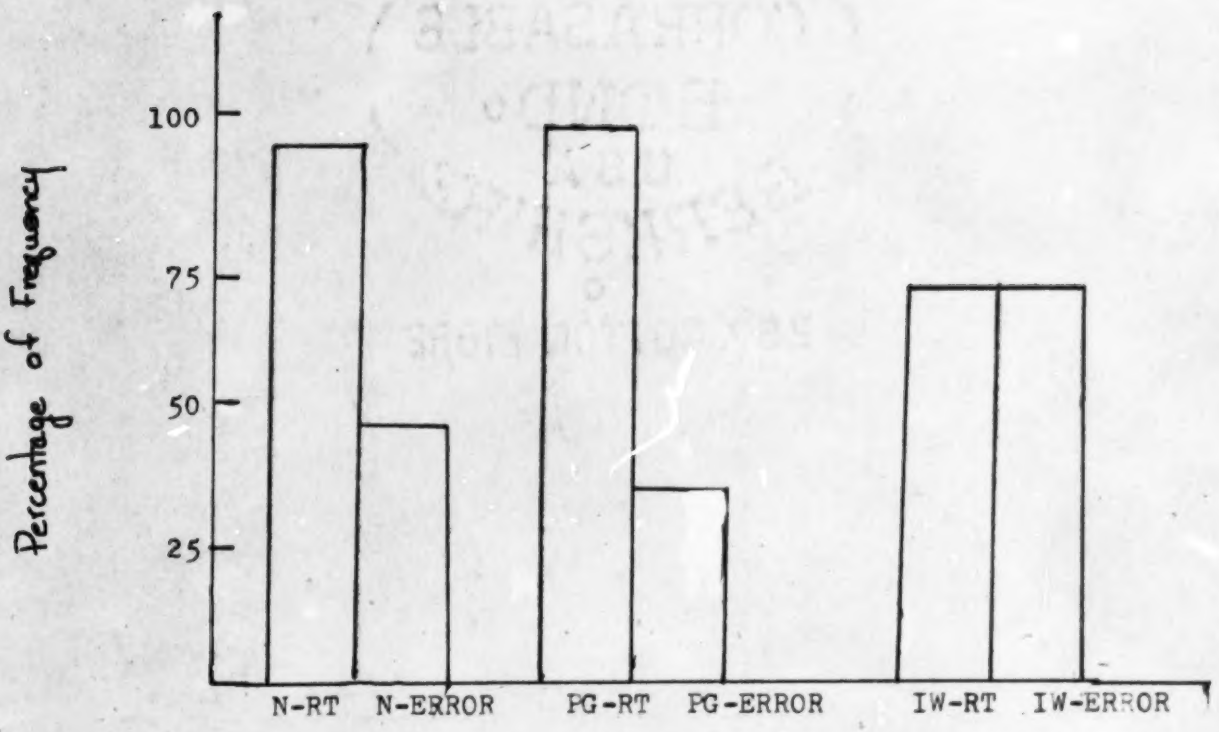

Figure 3. Bar Graph of Percentages of RT and ERRORS under Three Conditions

less ERROR than either the IW or the N conditions of learning. Thorndike's Law of Effect seems to be in operation. The Theoretical Law of Effect hypothesizes that some satisfying or rewarding consequency is necessary for learning.[12]

Wilcoxon Signed-Ranks Nonparametric Test applied to the scores of PG-RT and IW-RT did not produce significant results. The computed T was 48.0 for a N_S-R level 14 equaled 21 at 0.05 significance level and 13 at the 0.01 significance level. Thus, both levels were inadquate and nonsignificant.

The sums of the Signed-Ranks were +48.0 and -60.0. Because of the inequality in the absolute values the null hypothesis was rejected. Again the results of the graphic representations were confirmed in that there existed a differential effect between the two types of stimulation.

Frequency polygons were constructed comparing Ss distribution and the three variables under RT and ERRORS (See Figures 4 and 5). The PG's seemed to be more stable in the responses in the distribution range of ERRORS, However, a similar pattern of score distribution was evident in the plottings of RTs.

The results of Spearman's Nonparametric Rank Order Correlation Coefficients were also nonsignificant. Correlation Coefficients were computed between RT and ERROR for the three conditions. The resulting Rho yielded were: N control .234,

[12]Gregory A. Kimble. Conditioning and Learning (New York, 1961), p.205.

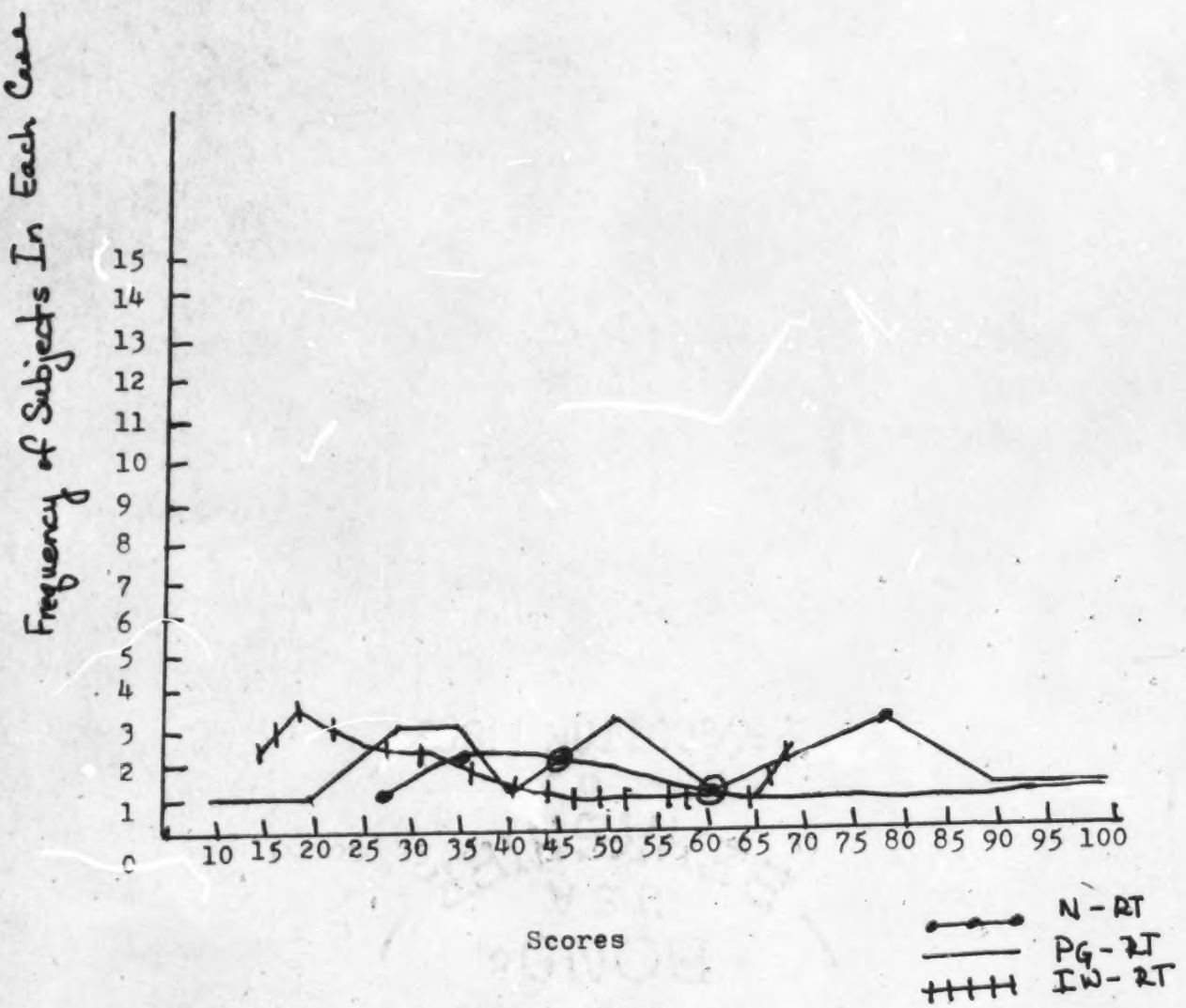

Figure 4. Frequency Polygon of Individual Subjects Reaction Time Scores

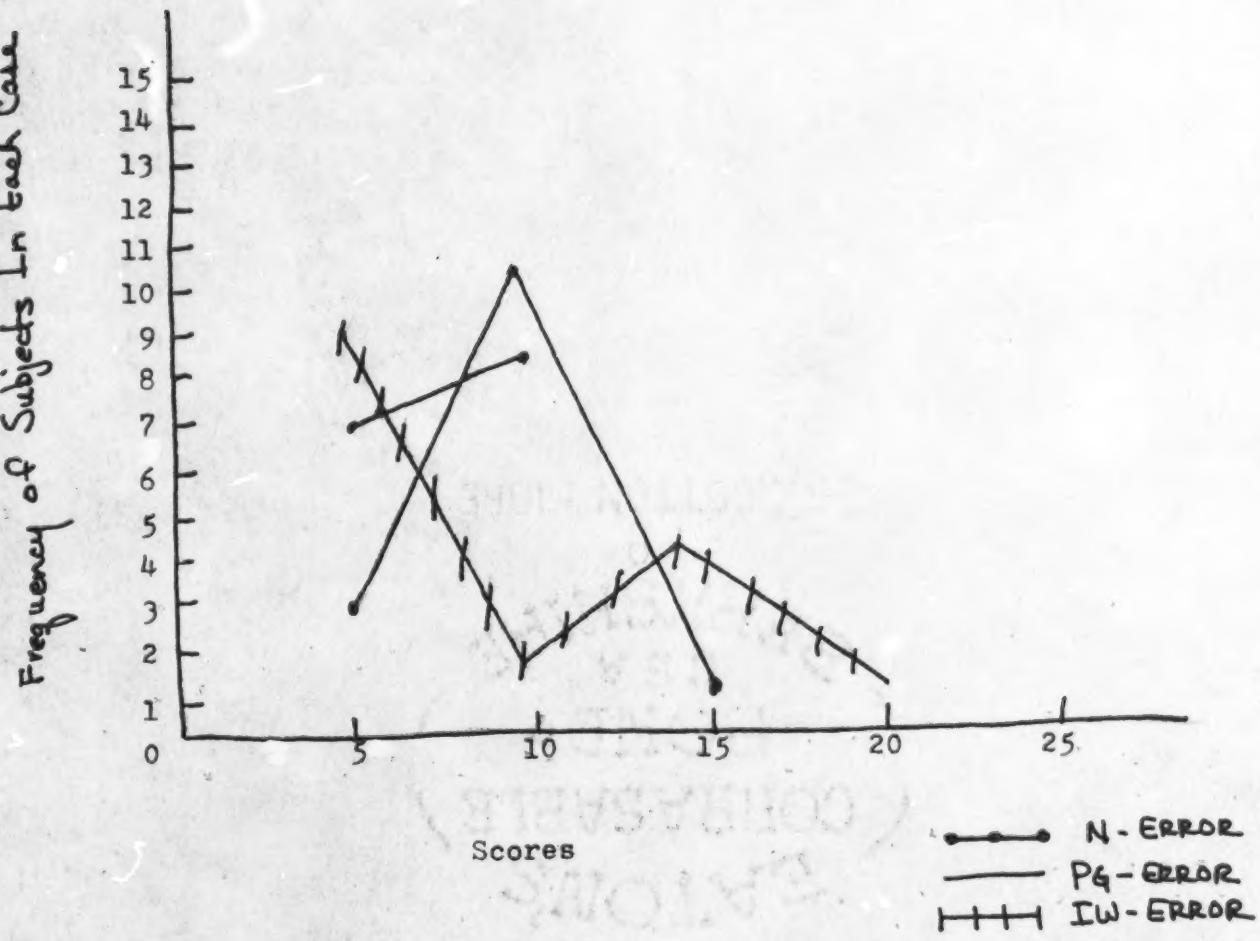

Figure 5. Frequency Polygon of Individual Subjects ERROR Scores

PG 259.58, and IW 194.64. From this data one could deduct that no relationship existed between RT and ERRORS. However, a marked deviation was indicated between the control score and the stimulus category scores.

Discussion

Both the X^2 and the Wilcoxon Signed-Rank Test were nonsignificant and could be interpreted as results obtained through a function of chance. The sums of Wilconon's Signed-Ranks rejected the null hypothesis. However, the inequality of the sum placed a limitation upon the comparisons indicating a definite bias existed. The graphic presentations also demonstrated a definite bias in the PG response condtion.

It seemed that Hull's Drive-Reduction Theory was in operation.[13] The drive-reduction theory treats motives abstractly and relates them to appropriate antecendent conditions. Finally, this theory was related to a drive-stimulus-reduction theory. In this view drives were regarded as intense stimuli and the reduction of this stimulation were considered to be reinforcing. Consequently, the PG positive pressure and the negative IW were stimuli that needed to be reduced. The reduction of the stimulation was inferred to be the reinforcing agent which resulted in learning. Learning could be considered a change in response which occurred as result of reinforced practice.

[13] Gregory A. Kimble. Conditioning and Learning (New York, 1961), p.240.

Summary and Conclusions

The purpose of the study was to investigate the hypothesis that incentives increase learning in late adolescents. The experimental design utilized the experimental research method. Fifteen Ss participated in the investigation. Positive and negative stimulation was administered to the Ss. The positive stimulation was peer group encouragement; while, negative stimulation was physical pain administered with the Ss' hands in ice water. The results indicated that no difference existed in either positive or negative stimulation as means of incentives; while, both were more effective then the N control condition in stimulating learning.

It seems that the statistical results may have been negligible and nonsignificant due to the small sample population utilized. This researcher recommends that further investigation be conducted. It is recommended that the addition studies include a larger sample population, as well as, a questionaire survey into the socioeconomic levels of the Ss, and further detailed statistical analysis.

Generally, in this study the graphic presentations indicated that incentive stimulation was effective for increased learning. Consequently, the element of curiosity still exists in the area and deserves further investigation.

Bibliography

Articles:

Baur, Jackson E., "Achievement and Role Definition of College Student", Cooperative Research Program of the Office of Education - U. S. Department of Health, Education, and Welfare (Department of Sociology: University of Kansas; Lawrence, Kansas), Cooperative Research Project No. 2605, ED 003354, 1965.

Brittain, Clay V., "Adolescent Choices and Parent-Peer Cross Pressures", American Sociological Review, 1963, 28, p. 385-391.

Brown, Robert D., "Effects of Structured and Unstructured Groups Counseling with High - and Low - Anxious College Underachievers", Journal of Counseling Psychology, 1969, Vol. 16, No. 3, p. 209-214.

Jansyn, Leon R. Jr., "Solidarity and Delinquency In A Street Corner Group", American Sociological Review, 1966, 31, p. 600-614.

Rhine, Ramon J., "The Effect of Peer Group Influence Upon Concept-Attitude Development and Change", Journal of Social Psychology, 1960, 51, p. 173-179.

Sugarman, Barry, "Social Norms In Teenage Boys' Peer Groups: A Study of Their Implications for Achievement and Conduct In Four London Schools", Human Relations, 1968, 21 (1), p.41-58.

Watts, William A., Lynch, Steven, and Whittaker, David, "Alienation and Activism In Today's College-Age Youth: Socialization Patterns and Current Family Relationships", Journal of Counseling Psychology, 1969, Vol. 16, No. 1, p. 1-7.

Books:

Drever, James. A Dictionary of Psychology (Penquin Books: Baltimore), 1968.

Hilgard, Ernest R. and Atkinson, Richard C.. Introduction to Psychology (Harcourt, Brace and World, Inc.: N.Y.), 1967.

Hollander, Edwin P.. Principles and Methods of Social Psychology (Oxford University Press: N.Y.), 1967.

Hurlock, Elizabeth B.. Adolescent Development (McGraw-Hill Book Company: N.Y.), 1967.

Kimble, Gregory A.. Conditioning and Learning (Appleton-Century-Crofts, Inc.: N.Y.), 1961.

Underwood, Benton J.. Experimental Psychology (Meredith Publishing Company: N.Y.), 1966.

Holy Bible-Old Testament: Exodus 12: 21-25.

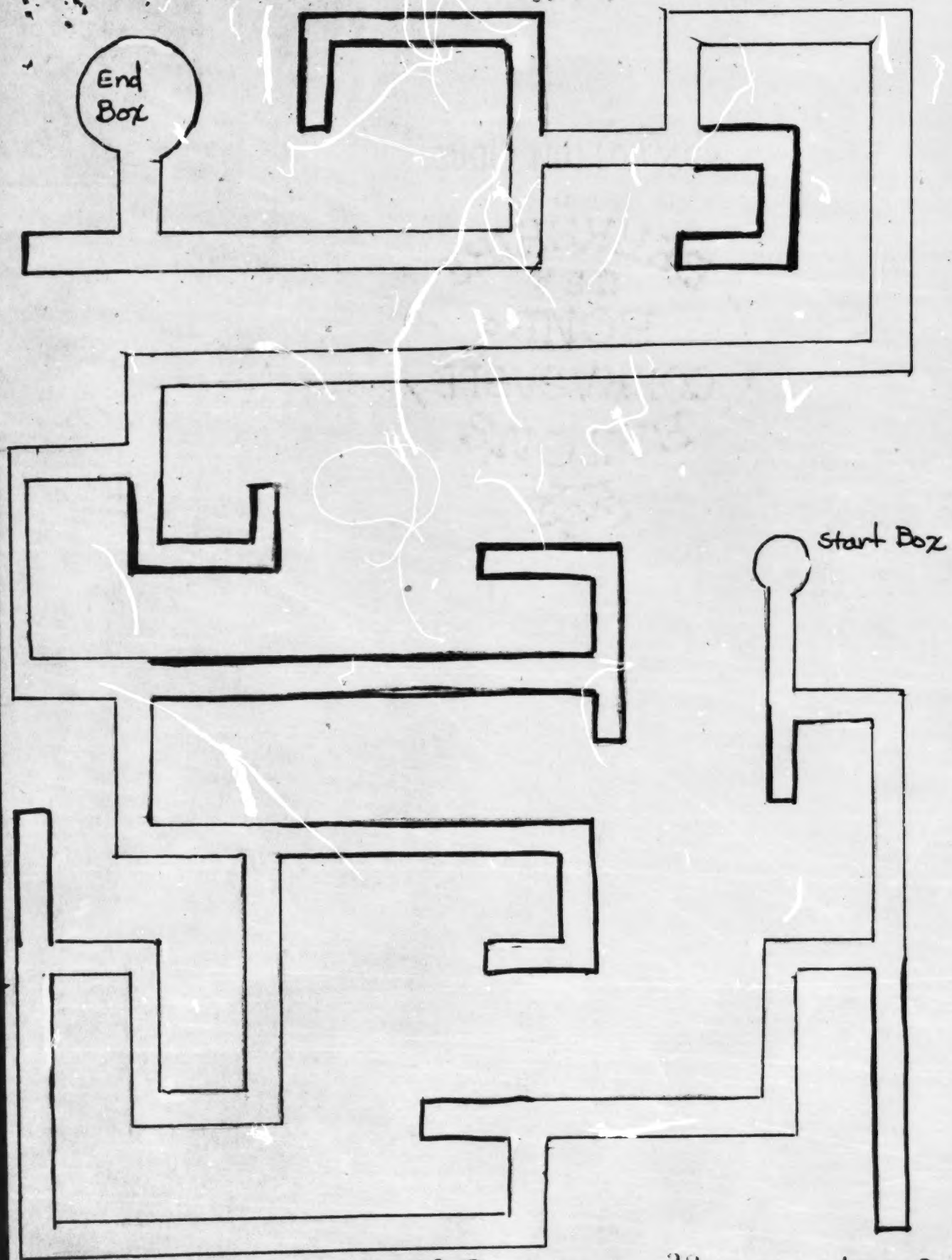

Figure 1 - Diagram of Pencil Maze